THE IMPACT OF INTERVENTIONS TO PREVENT MOTHER TO CHILD TRANSMISSION OF HIV AT KENYATTA NATIONAL HOSPITAL.

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ABSTRACT

RESEARCH QUESTION**: What effect has provision of Antiretroviral drugs (ARVs), mode of delivery and mode of infant feeding had on the Mother to Child Transmission (MTCT) of HIV infection at KNH?**

OBJECTIVES

- To describe the social and demographic characteristics of mothers on PMTCT program.
- To determine the prevalence of HIV infection in infants of HIV positive mothers on PMTCT program at KNH.
- To determine the correlation between maternal CD4 cell count and transmission of HIV to the infant.
- To determine the correlation between ARV regime used, mode of delivery and infant feeding option and the risk of transmission of HIV infection to the infant.

STUDY DESIGN: This was a cross-sectional study.

SETTING: The study was conducted in clinic 18(the postnatal clinic) of Kenyatta National Hospital, Nairobi.

STUDY POPULATION: HIV positive mothers and their infants attending high risk postnatal clinic at KNH.

SAMPLE SIZE: 207 mother-infant pairs.

DATA COLLECTION AND ANALYSIS: Mothers' bio-data, CD4 cell count, ARV regime used ,mode of delivery, mode of infant feeding and infants PCR results were entered in the data collection form (appendix Π) and analyzed using the SPSS computer package.

PRIMARY OUTCOME MEASURE: Detection of HIV infection, at age 6 weeks, in infants born to mothers in the PMTCT program at KNH.

ETHICAL CONSIDERATION: Mothers were informed of the study procedure and assured of their confidentiality. Only those who consented participated in the study. Those who declined were offered equal treatment. Ethical approval to conduct the study was sought from the Ethics and Research committee of Kenyatta National Hospital.

RESULTS: Majority of the mothers attending the high risk postnatal clinic were 25 to 34 years old (74.9%) while 59.4% had attained at least secondary level of education. The overall Mother to Child Transmission rate at six weeks of age was 2.4%. Fifty per cent of the mothers had a CD4 cell count of more than 500 cell/ml while 21% had CD4 cell count of below 200 cells/ml. Mothers with CD4 cell count of below 200 were likely to transmit HIV infection to their infants, p=0.04. Zidovudine was the most commonly used ARV regime (58.5%). Others used triple therapy (29.5%), Nevirapine only (10.6%) and PEP (1.4%). There was no significant association between the ARV regime used and PCR status of the infant, p=0.804. Most infants (95.2%) were born at term, 72.5% were born through elective caesarean section and weighed more than 2500 grams (94.2%). Seventy per cent of the infants were put on formula feeding while 28% were exclusively breastfed. There was no significant association between the mode of feeding and the likelihood of transmitting HIV infection from the mother to her infant, p=0.269.

CONCLUSIONS: The reported MTCT rate without any interventions ranges between 20 and 45% in breastfeeding populations. The study showed an MTCT rate of 2.4%. Thus, PMTCT interventions particularly antiretroviral drugs were shown to be significantly associated with lower MTCT of HIV infection at KNH.

RECOMMENDATIONS: PMTCT services should be promoted and provided to all HIV infected pregnant mothers. Mothers with low CD4 cell count should be offered HAART for treatment of their HIV infection which also lowers vertical transmission of HIV. A larger study following up the infants until after cessation of breastfeeding is needed in order to assess the effect of breastfeeding on MTCT.